

# Preliminary Model Hindcast of Hurricane Katrina Storm Surge

*21 November, 2005*

CNMOC  
*Stennis Space Center, MS*

*Preliminary Katrina Storm Surge Hindcasts*

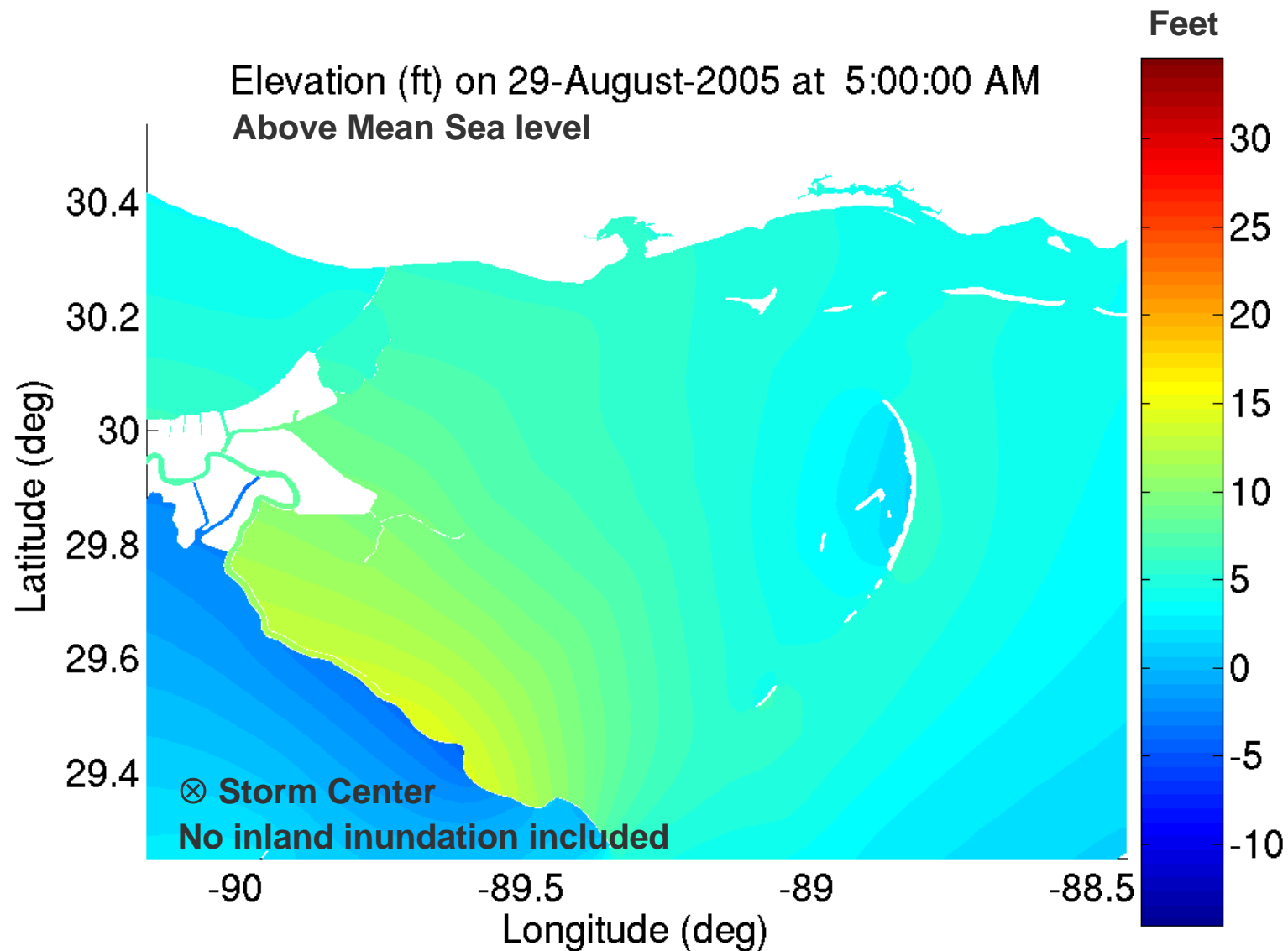
# Preliminary Storm Surge Hindcasts

- Storm surge hindcasts are performed using the Advanced Circulation Model<sup>1</sup> (ADCIRC-2DDI).
- Inundation is not included in these simulations so inland flooding is not presented.
- Hurricane wind fields used to drive ADCIRC are obtained from the NOAA Hurricane Research Division of AOML  
[http://www.aoml.noaa.gov/hrd/Storm\\_pages/katrina2005/wind.html](http://www.aoml.noaa.gov/hrd/Storm_pages/katrina2005/wind.html)
- These are PRELIMINARY results. When more detailed hurricane wind fields become available, updated storm surge hindcasts will be posted.

<sup>1</sup>Luetlich, R.A., J.J. Westerrink, and N.W. Scheffner, 1992: ADCIRC: an advanced three-dimensional circulation model for shelves coasts and estuaries, report 1: theory and methodology of ADCIRC-2DDI and ADCIRC-3DL, Dredging Research Program Technical Report DRP-92-6, U.S. Army Engineers Waterways Experiment Station, Vicksburg, MS, 137p.

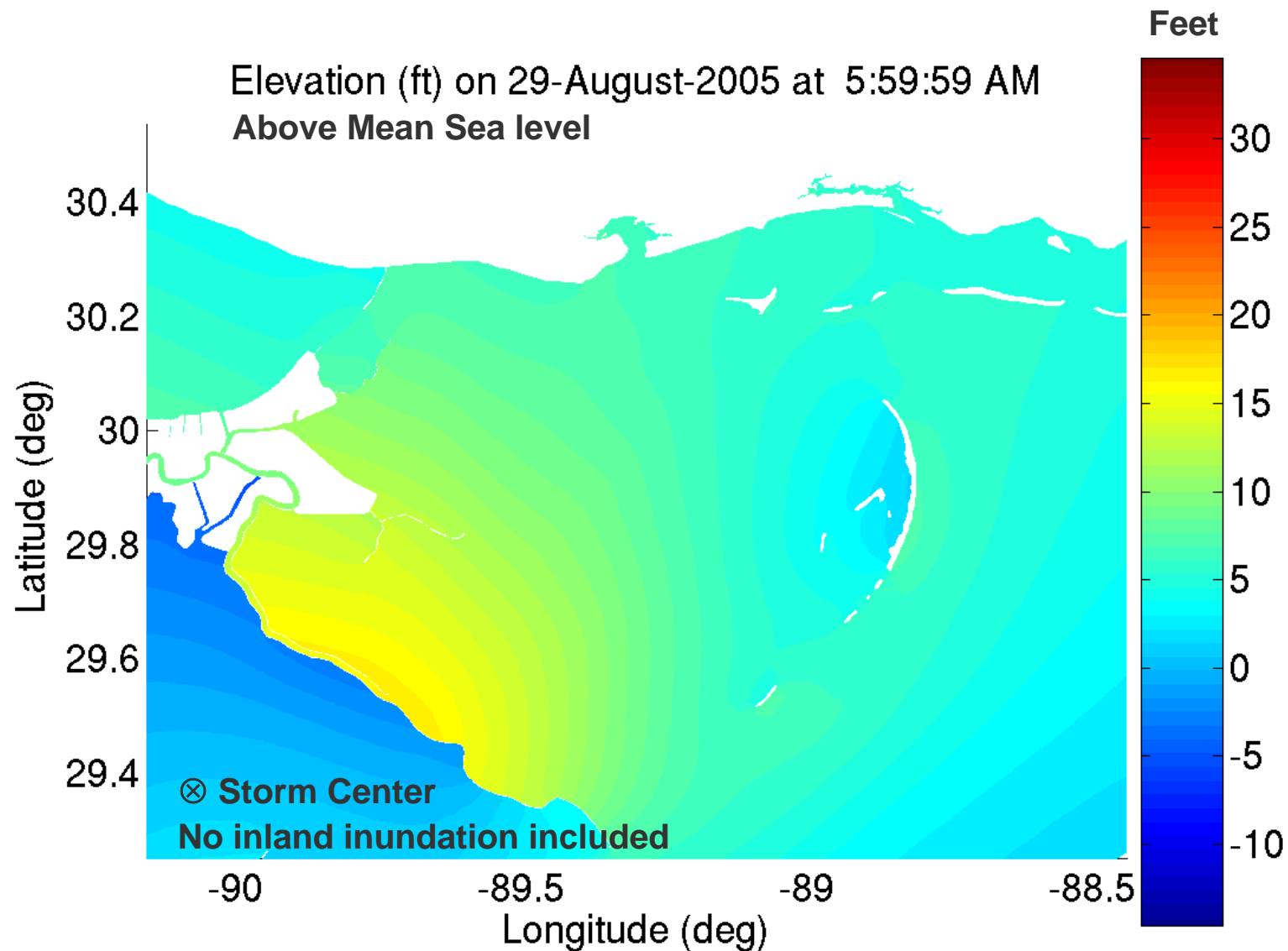
<sup>2</sup>Holland, G.J, 1980: An analytical model of the wind and pressure profiles in hurricanes, *Monthly Weather Review*, 106, 1212-1218.

# ADCIRC Computed Tides + Surge



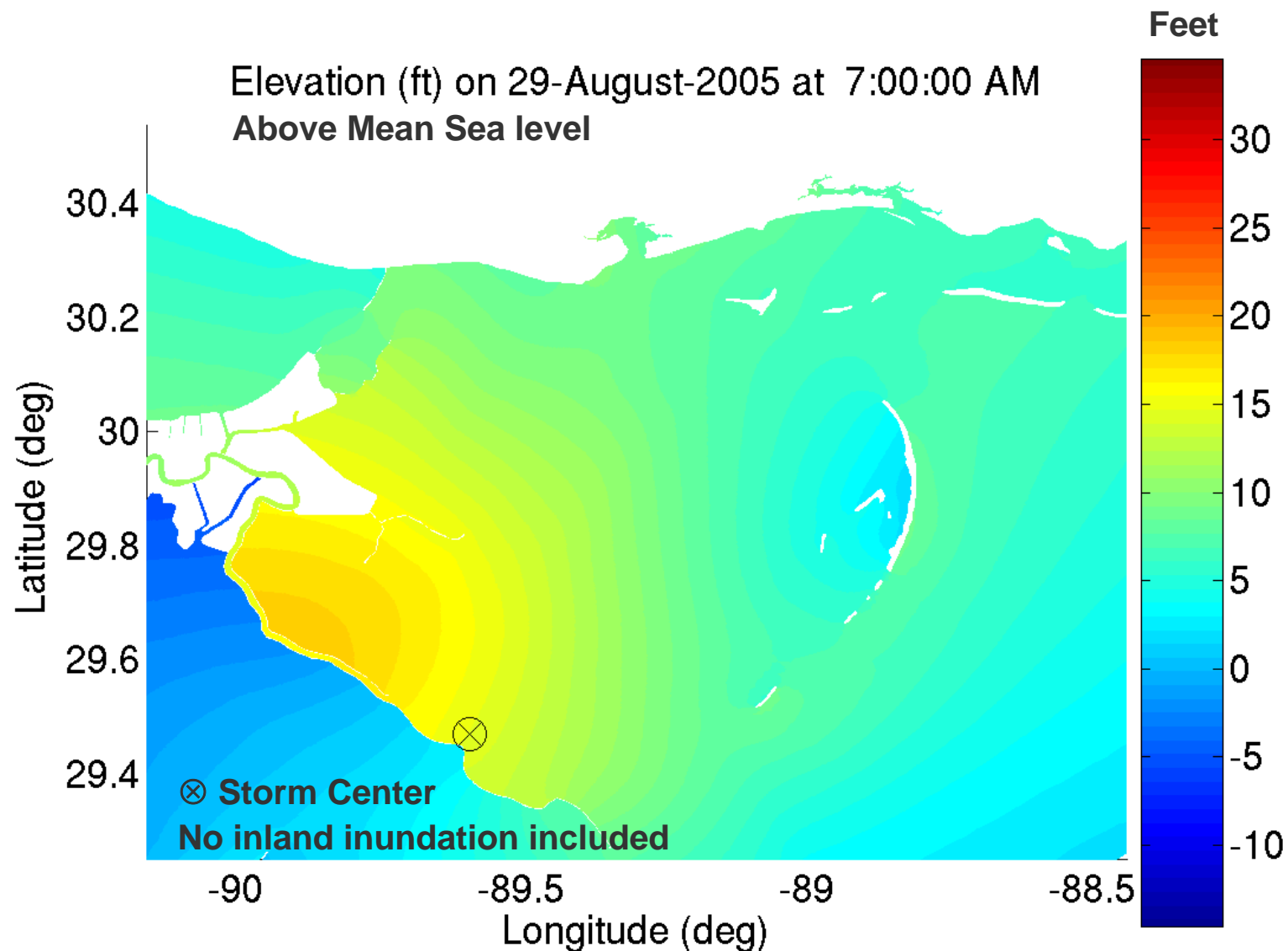
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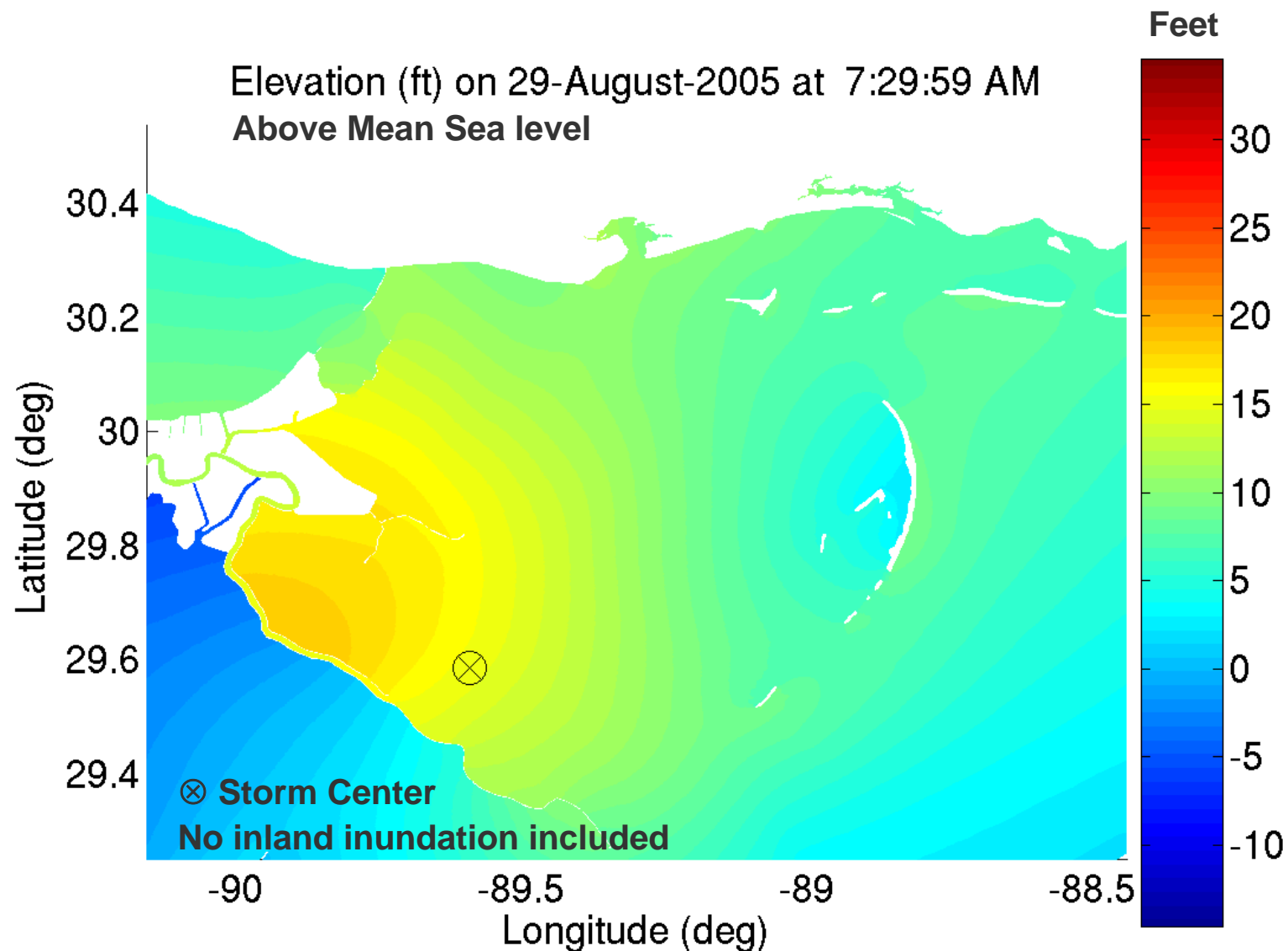
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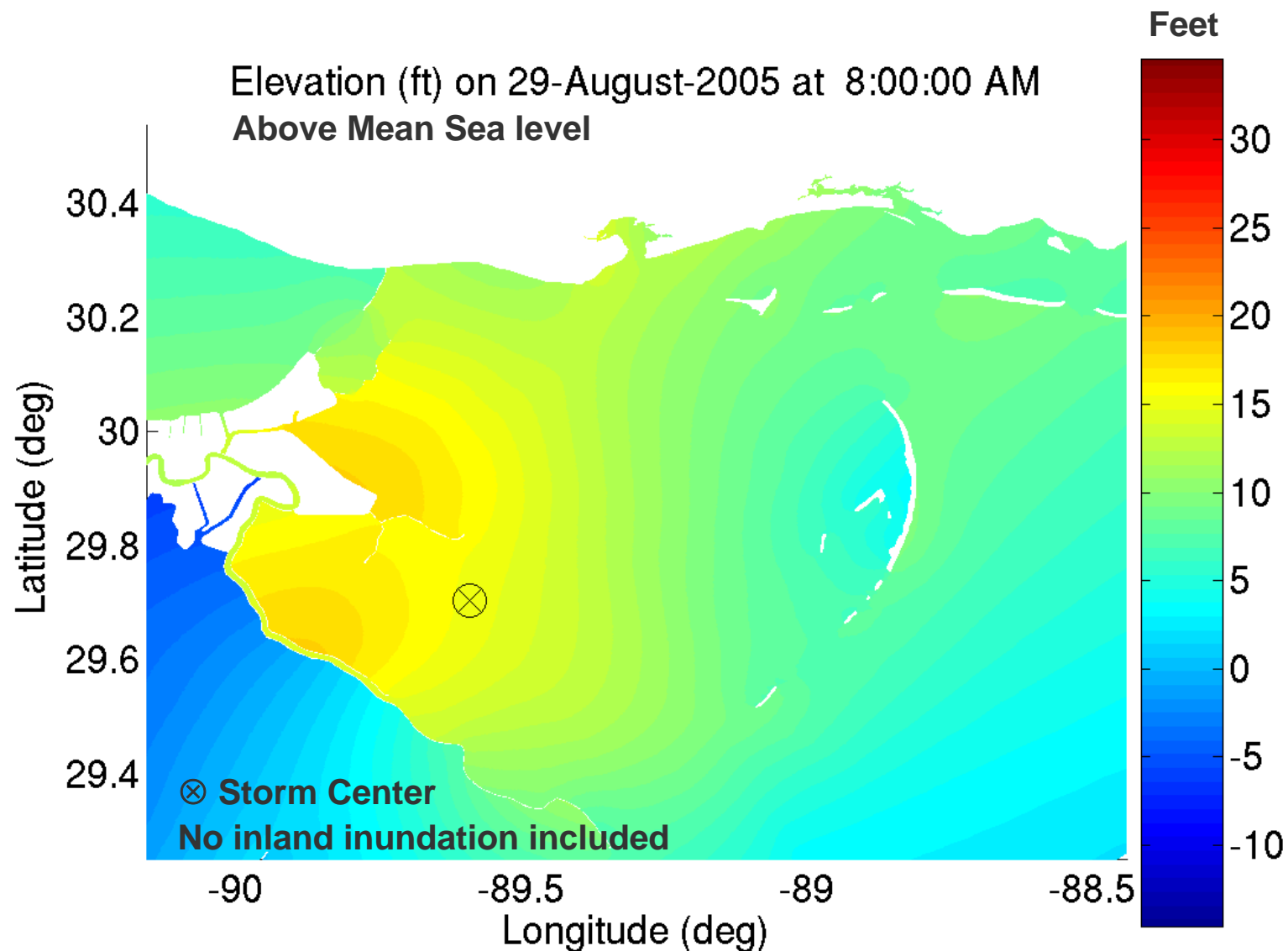
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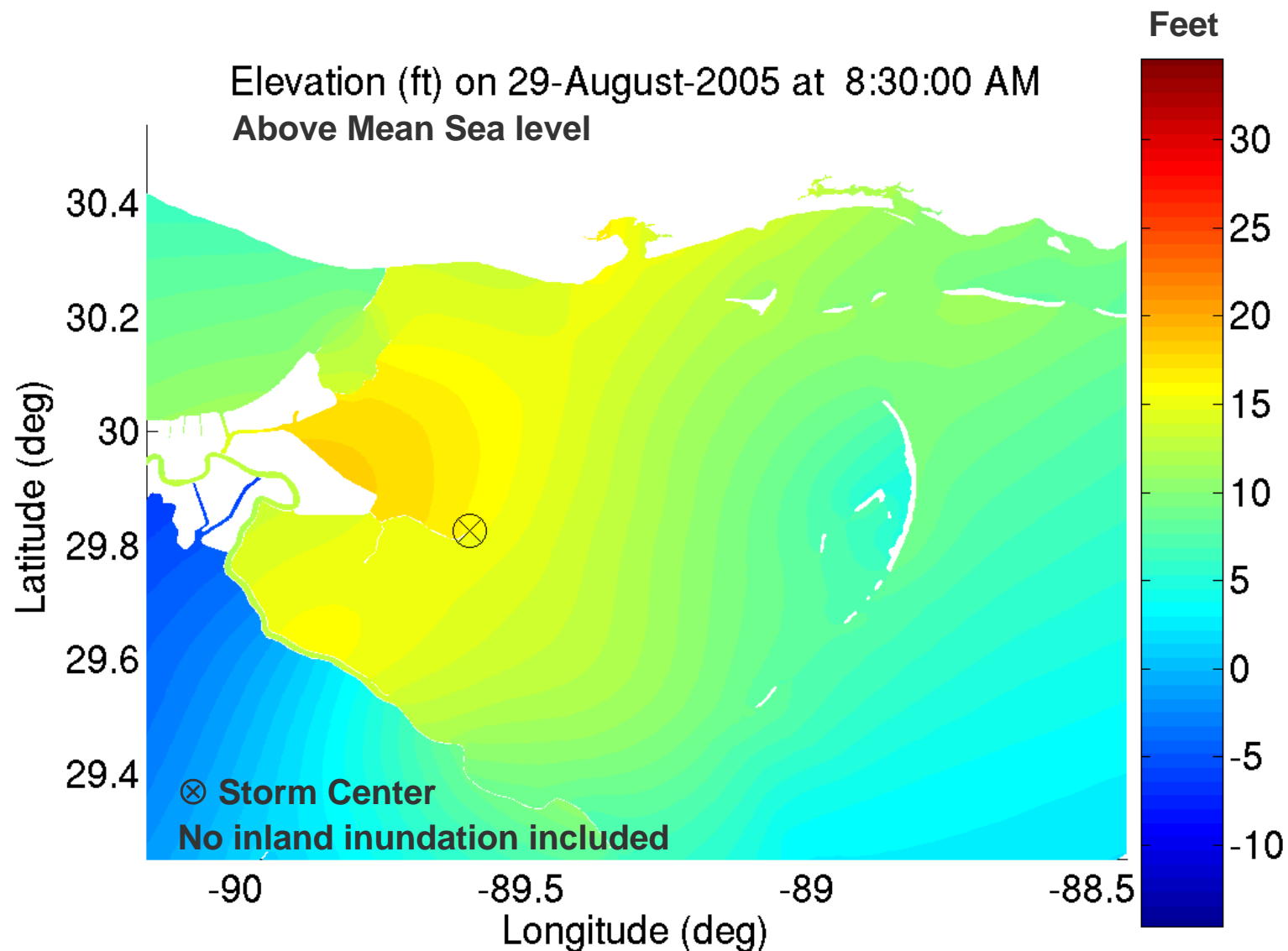
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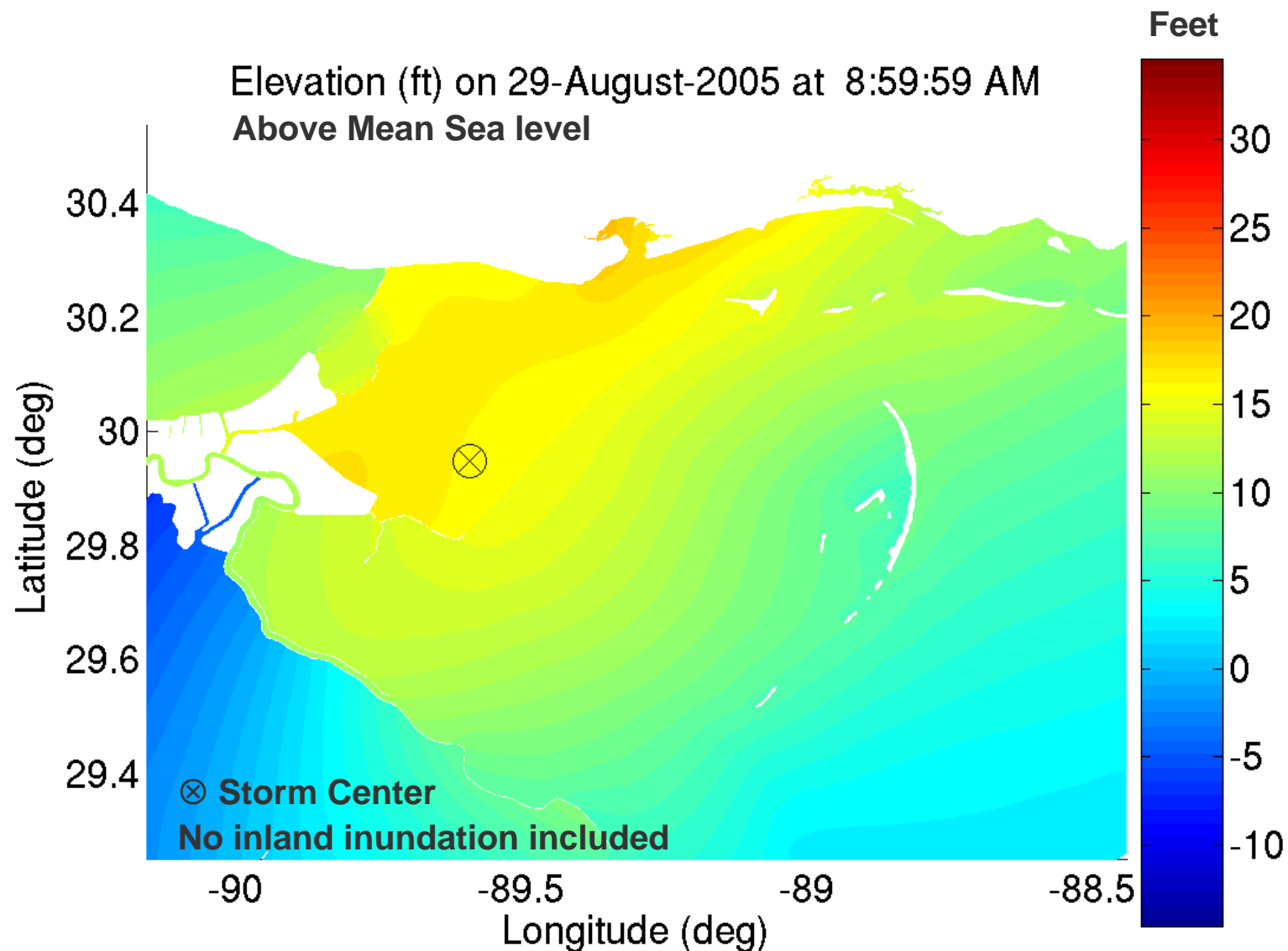
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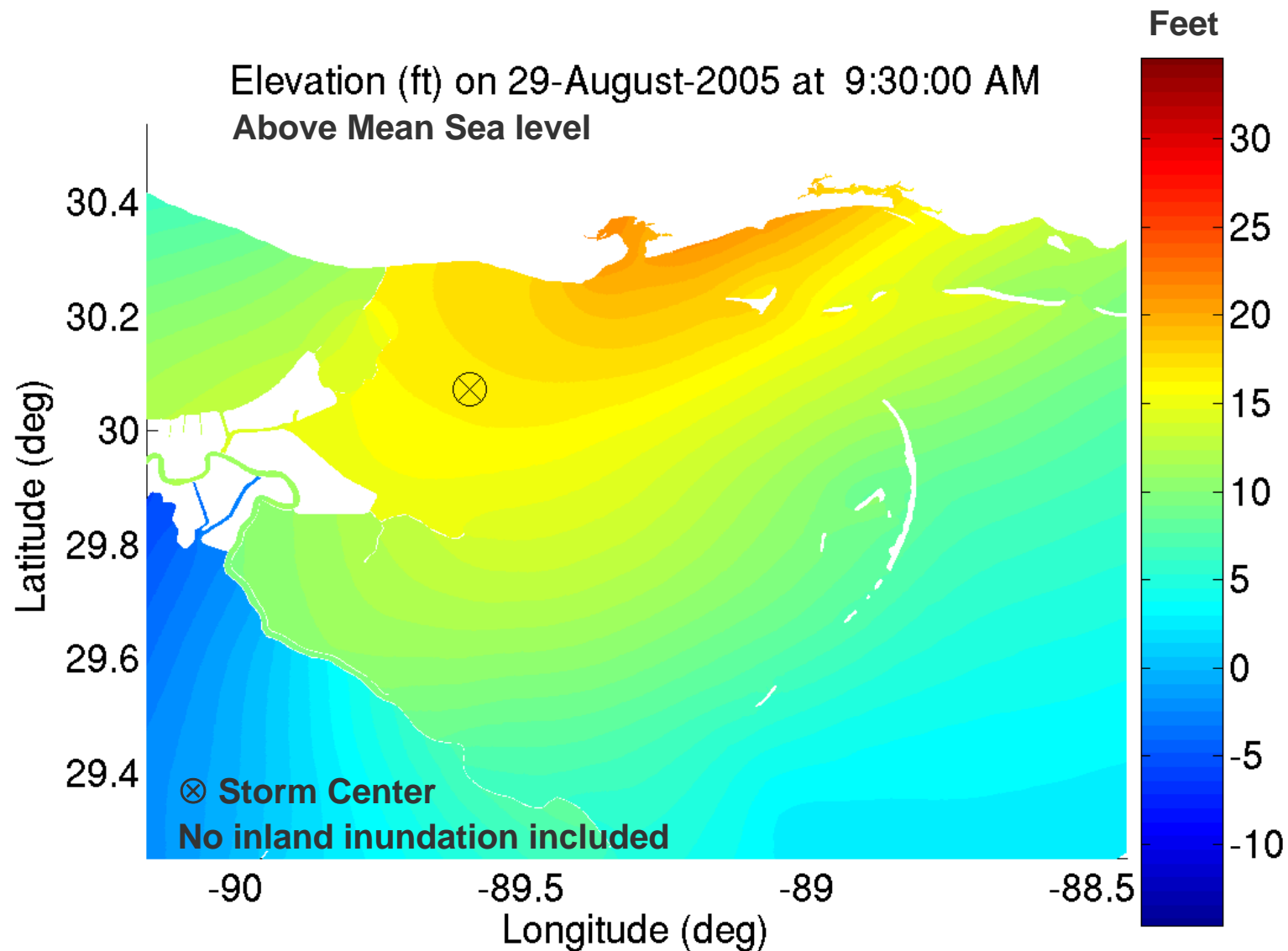


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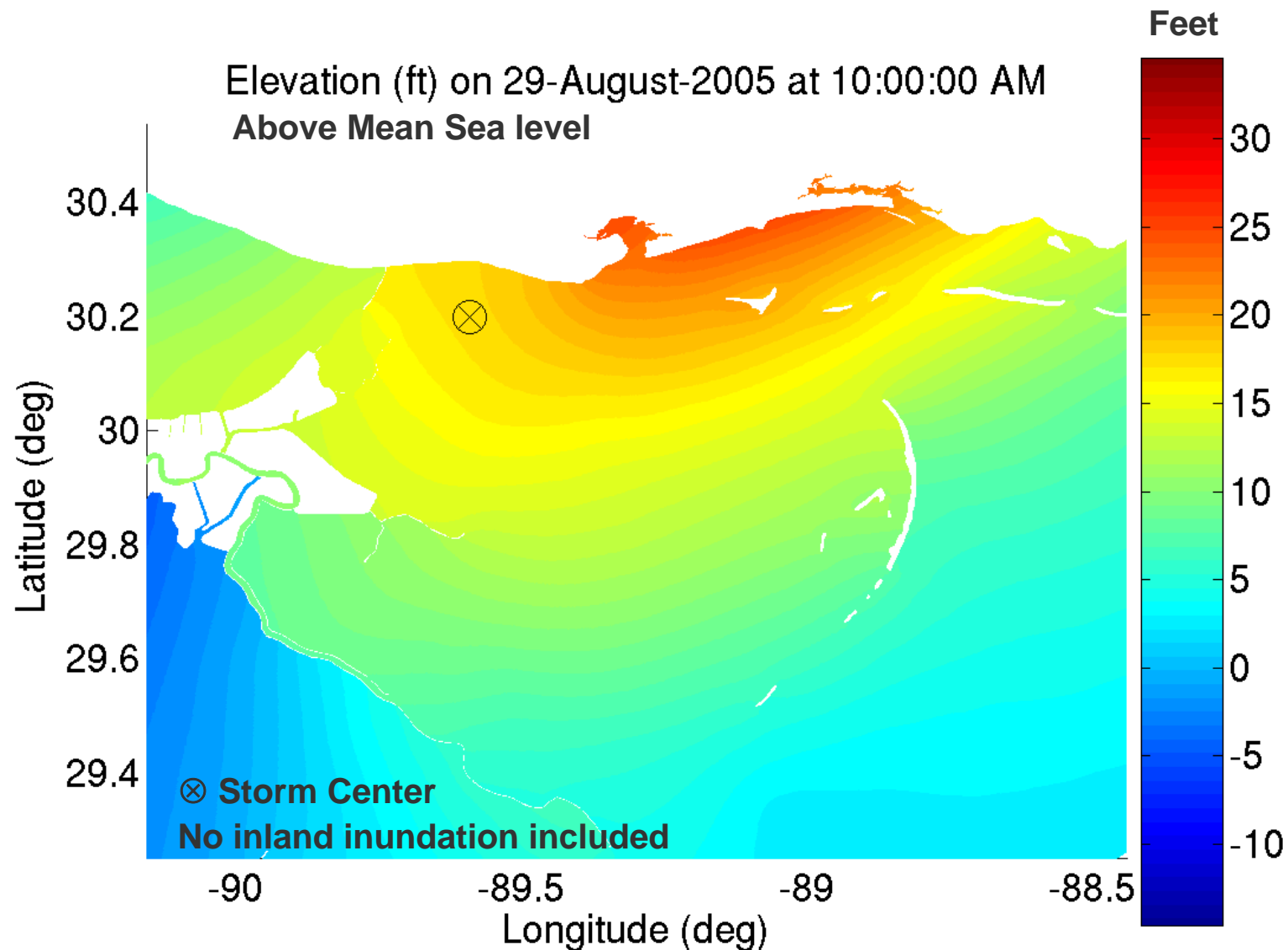
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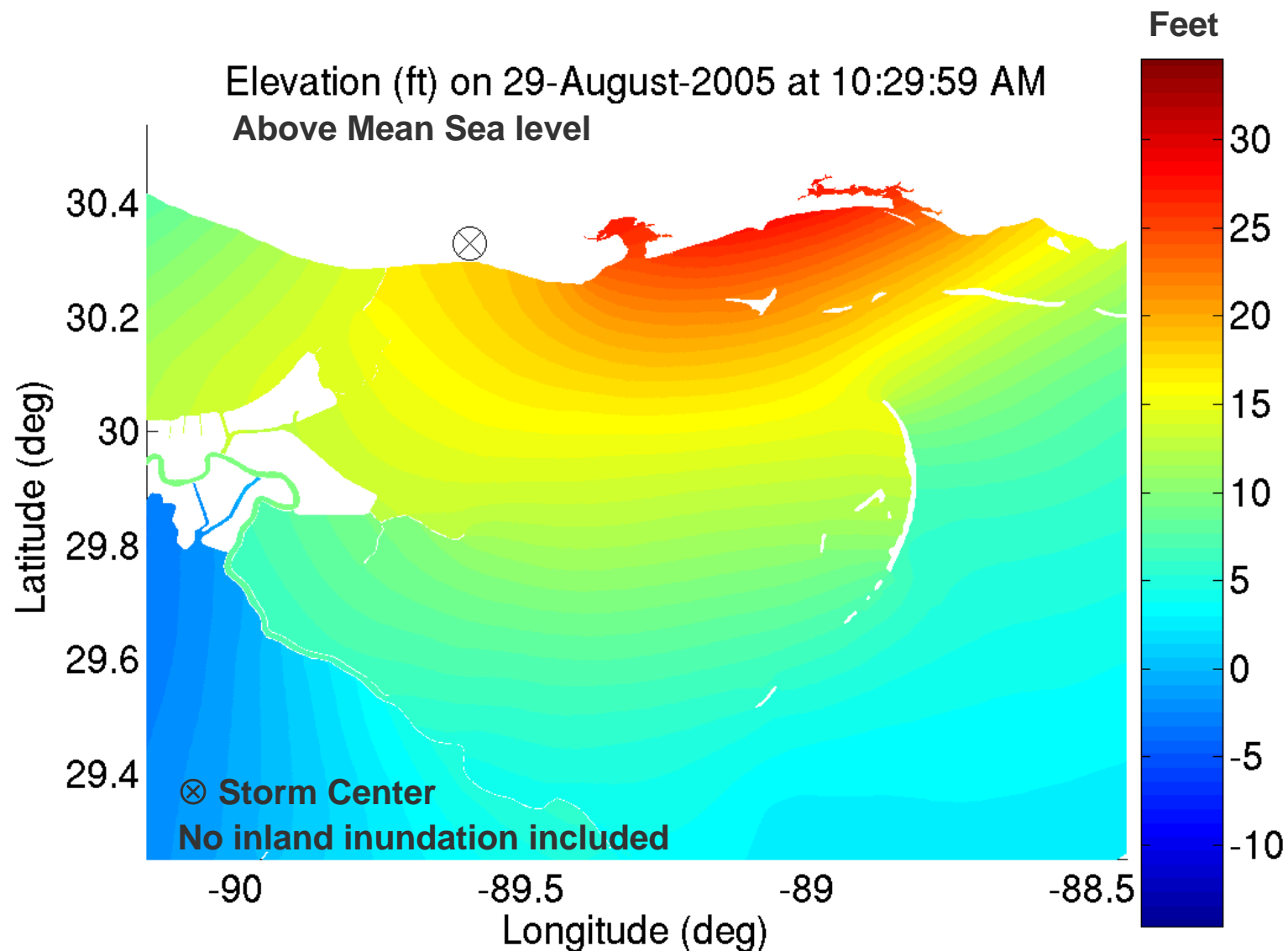
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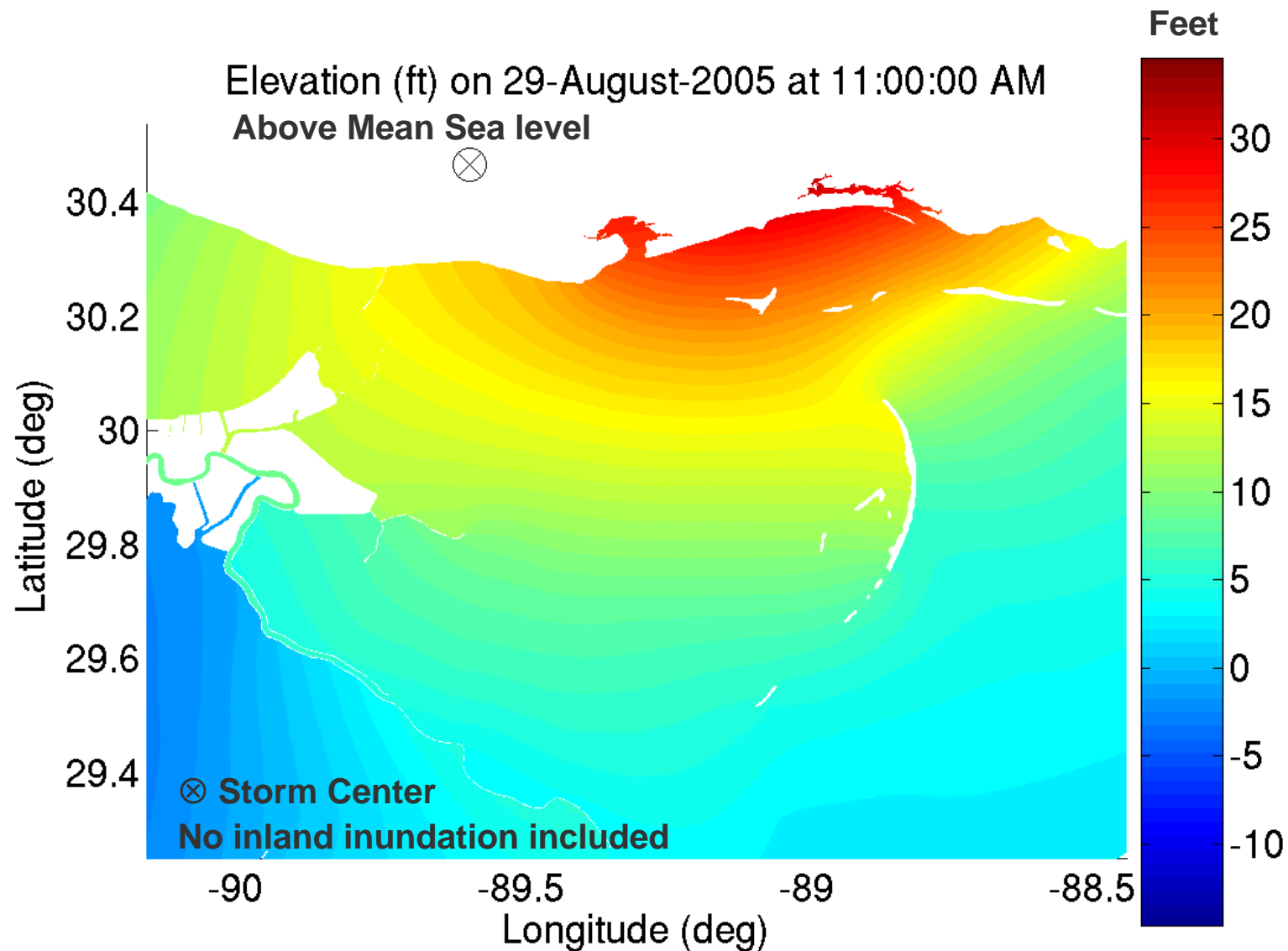
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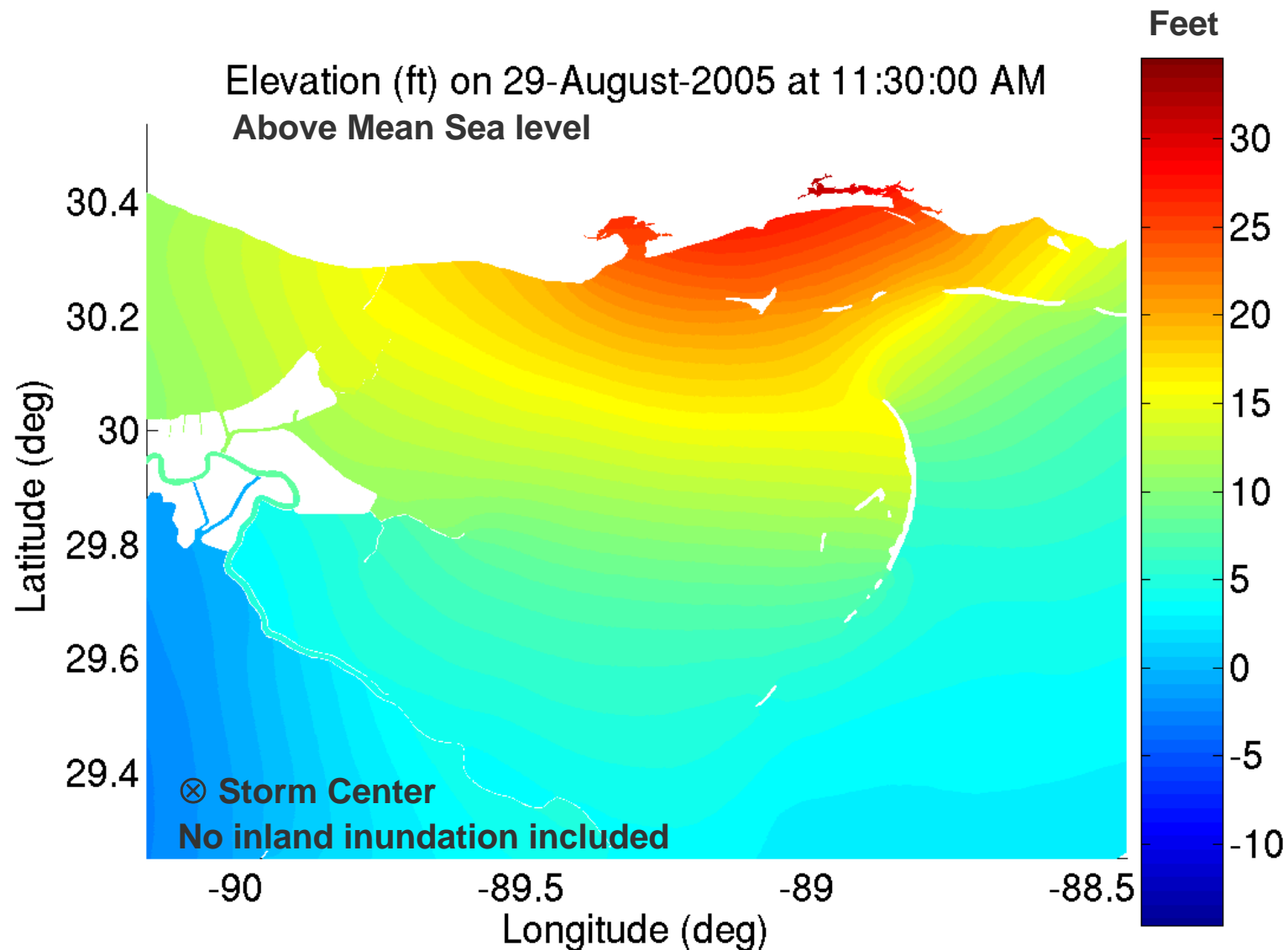
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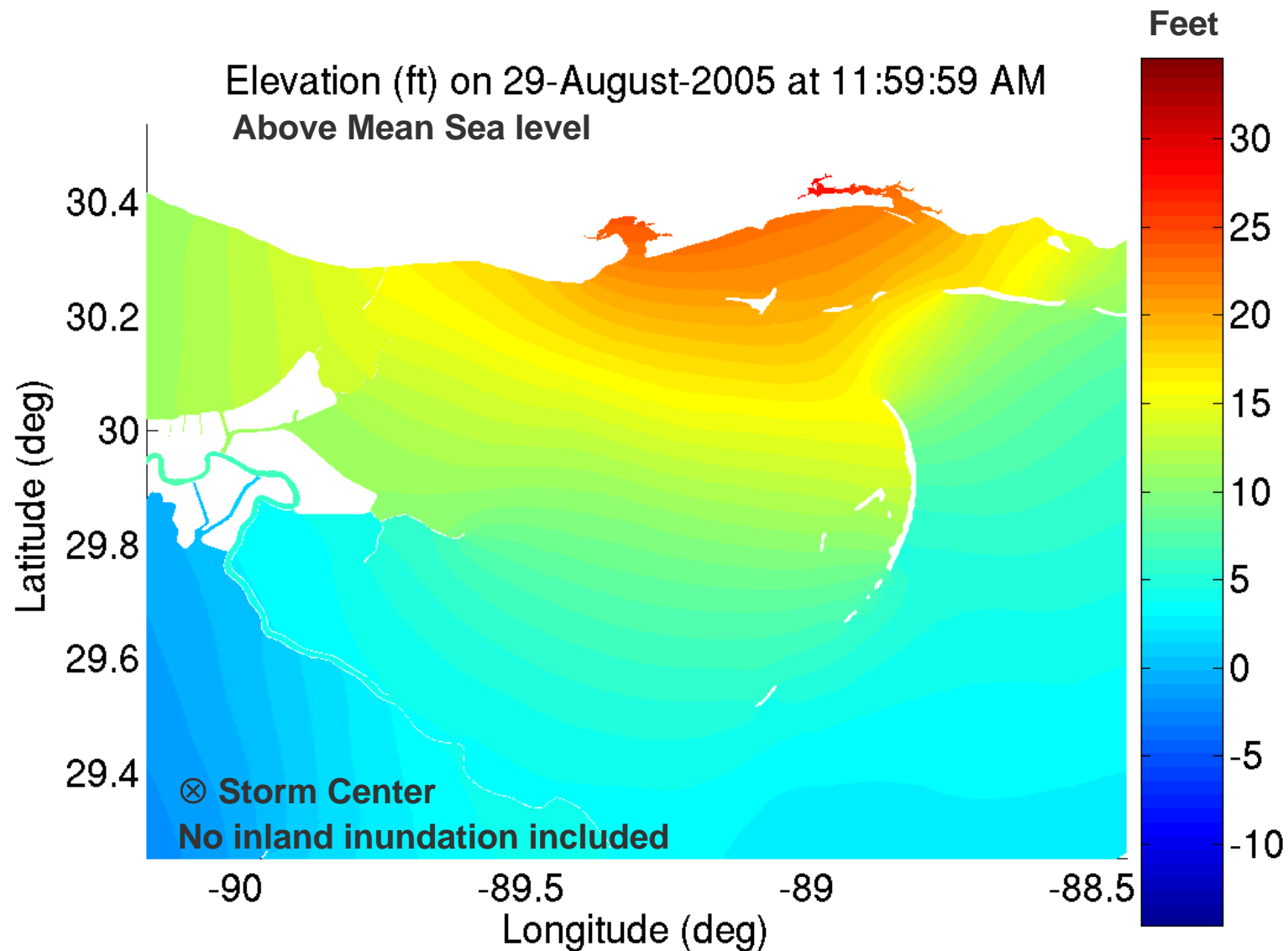
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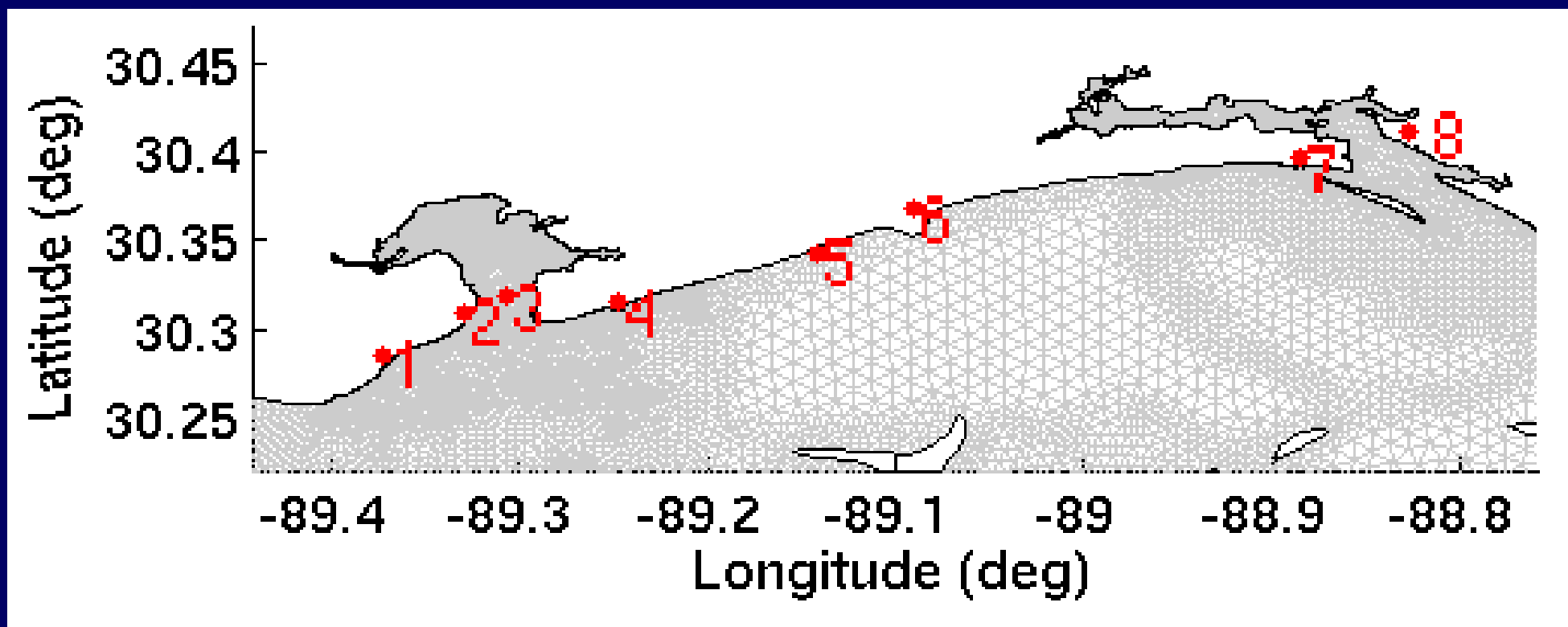
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# Selected Landmarks

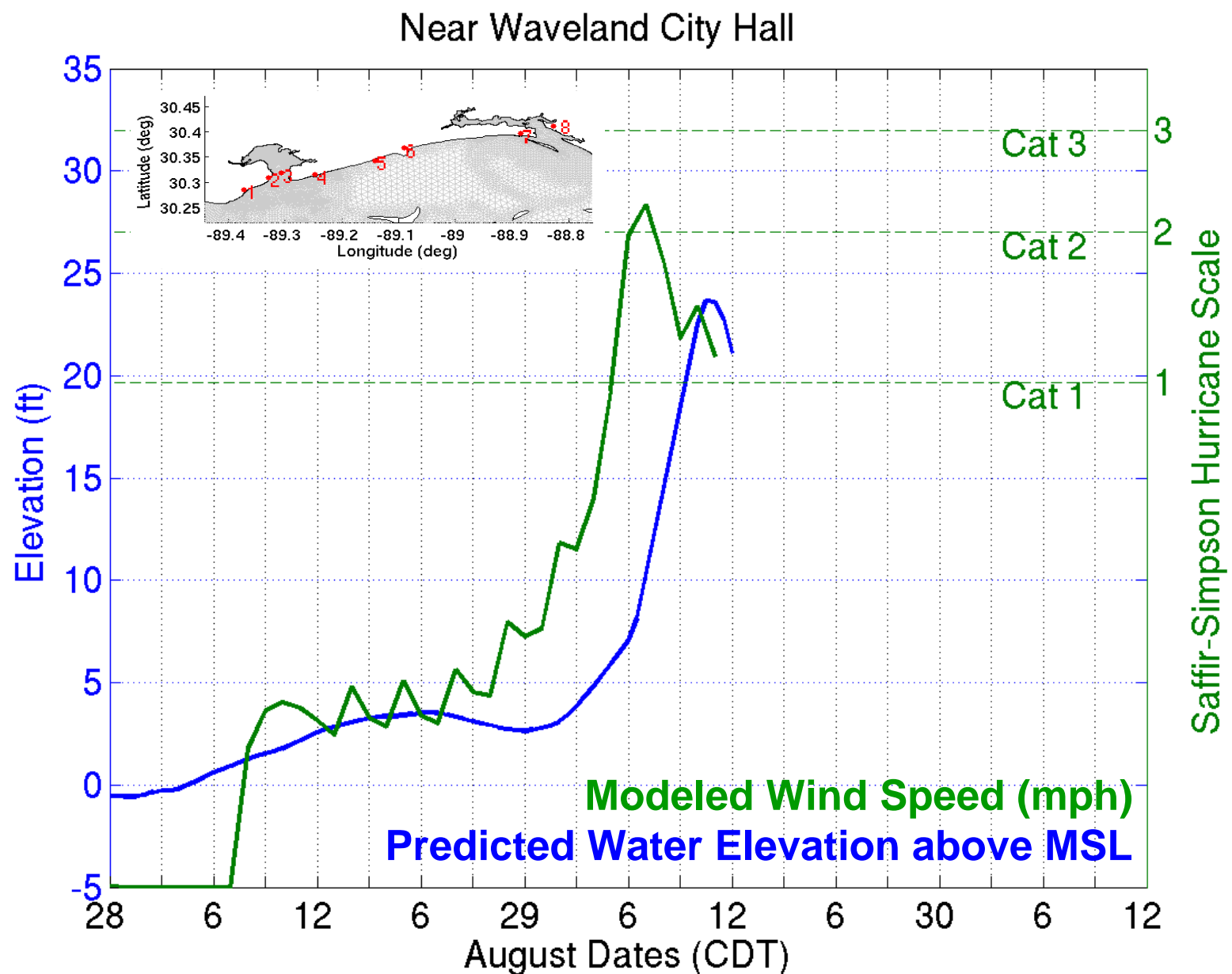


1. Waveland City Hall
2. Bay St. Louis City Hall
3. Bay St. Louis bridge
4. Pass Christian City Hall

5. Long Beach harbor
6. Gulfport City Hall
7. Biloxi City Hall
8. Ocean Springs City Hall

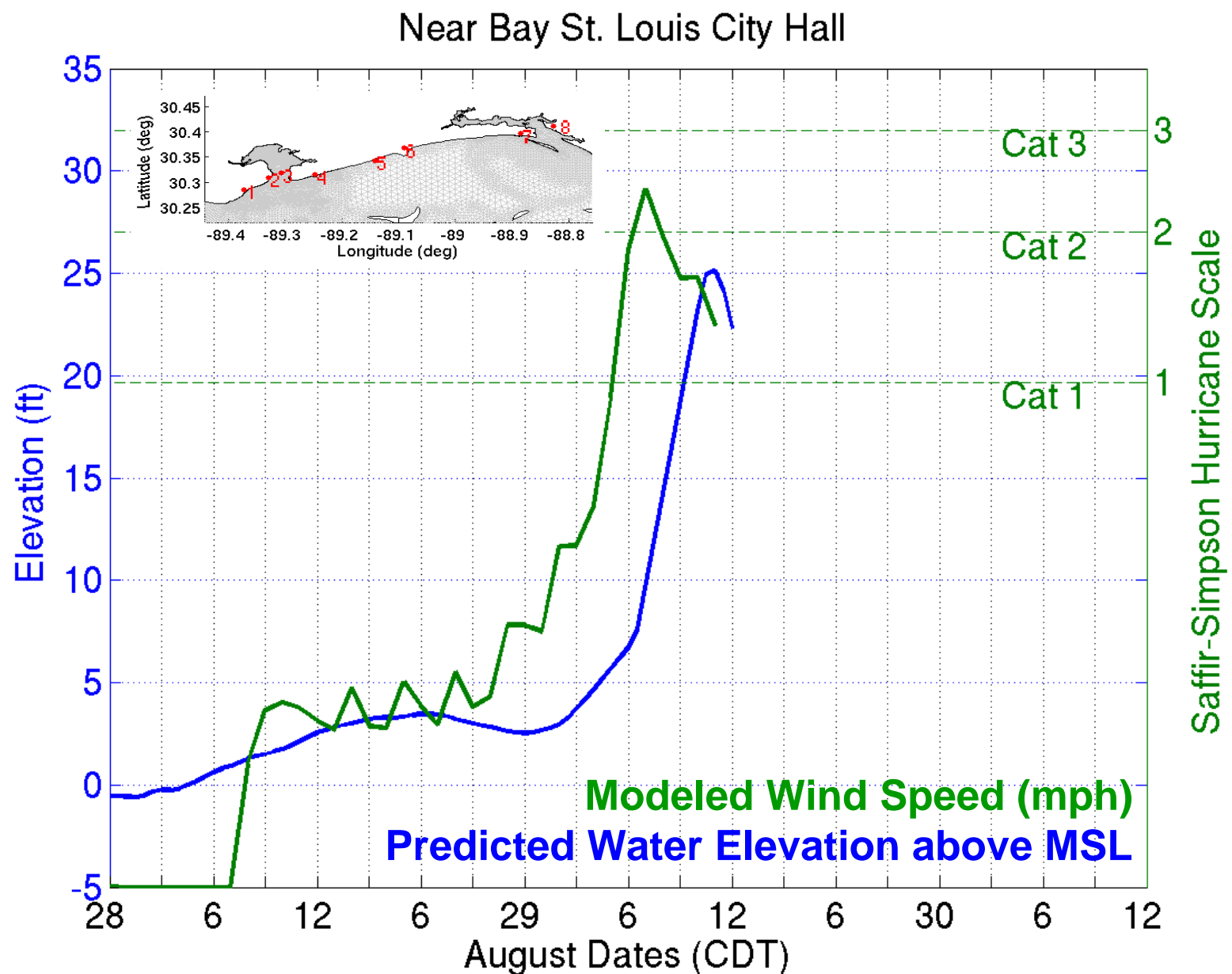


# Wind Speed vs. Water Level



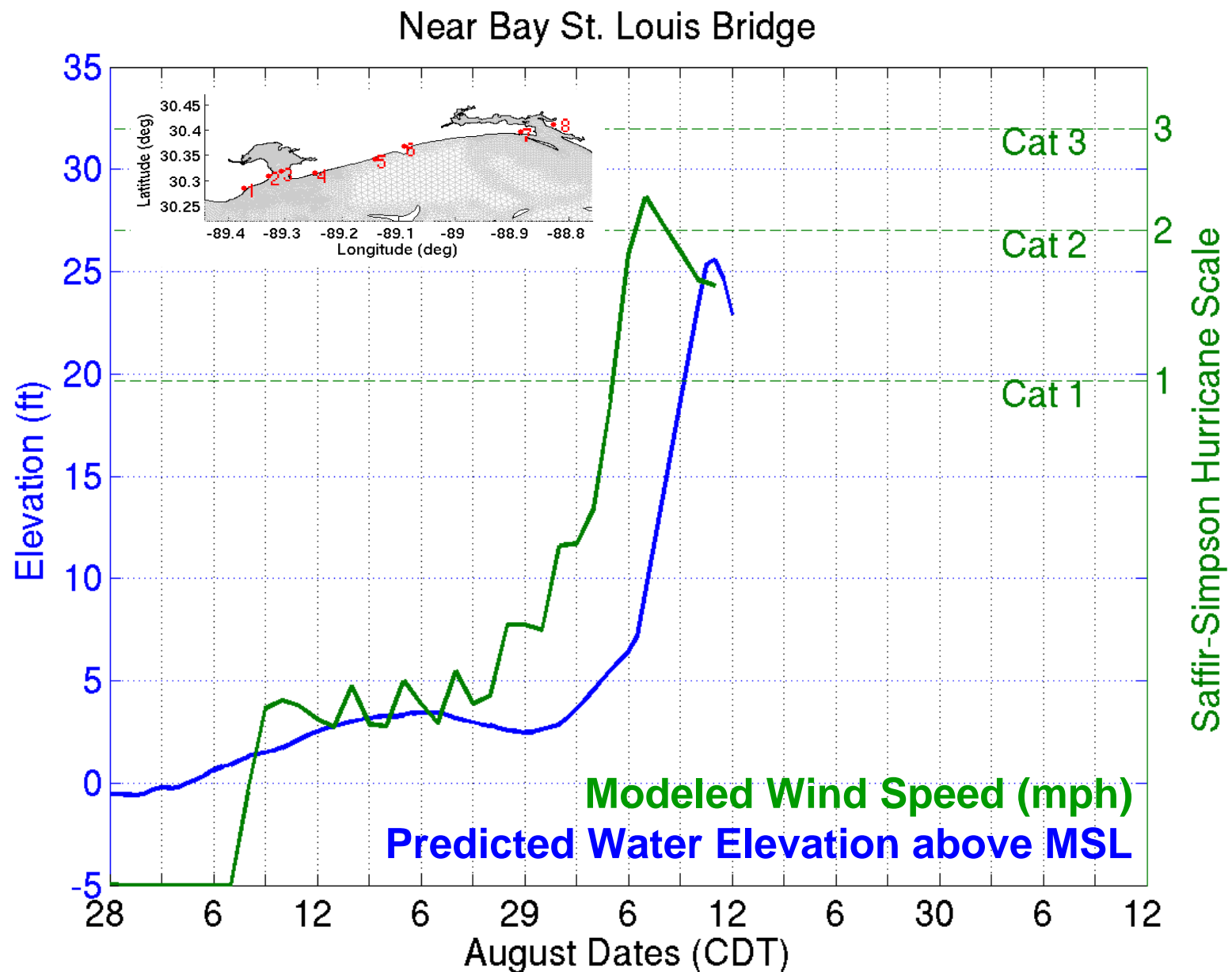
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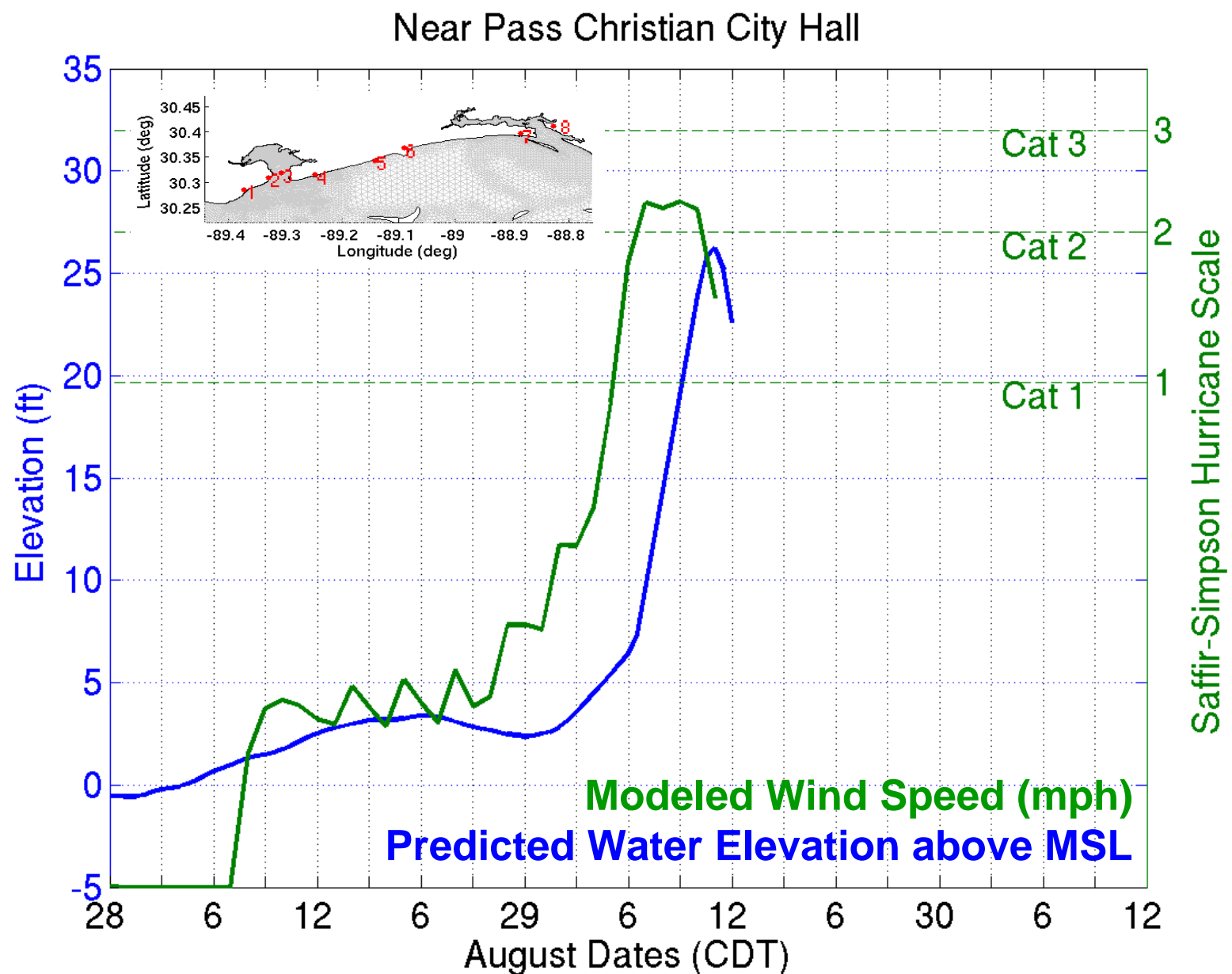
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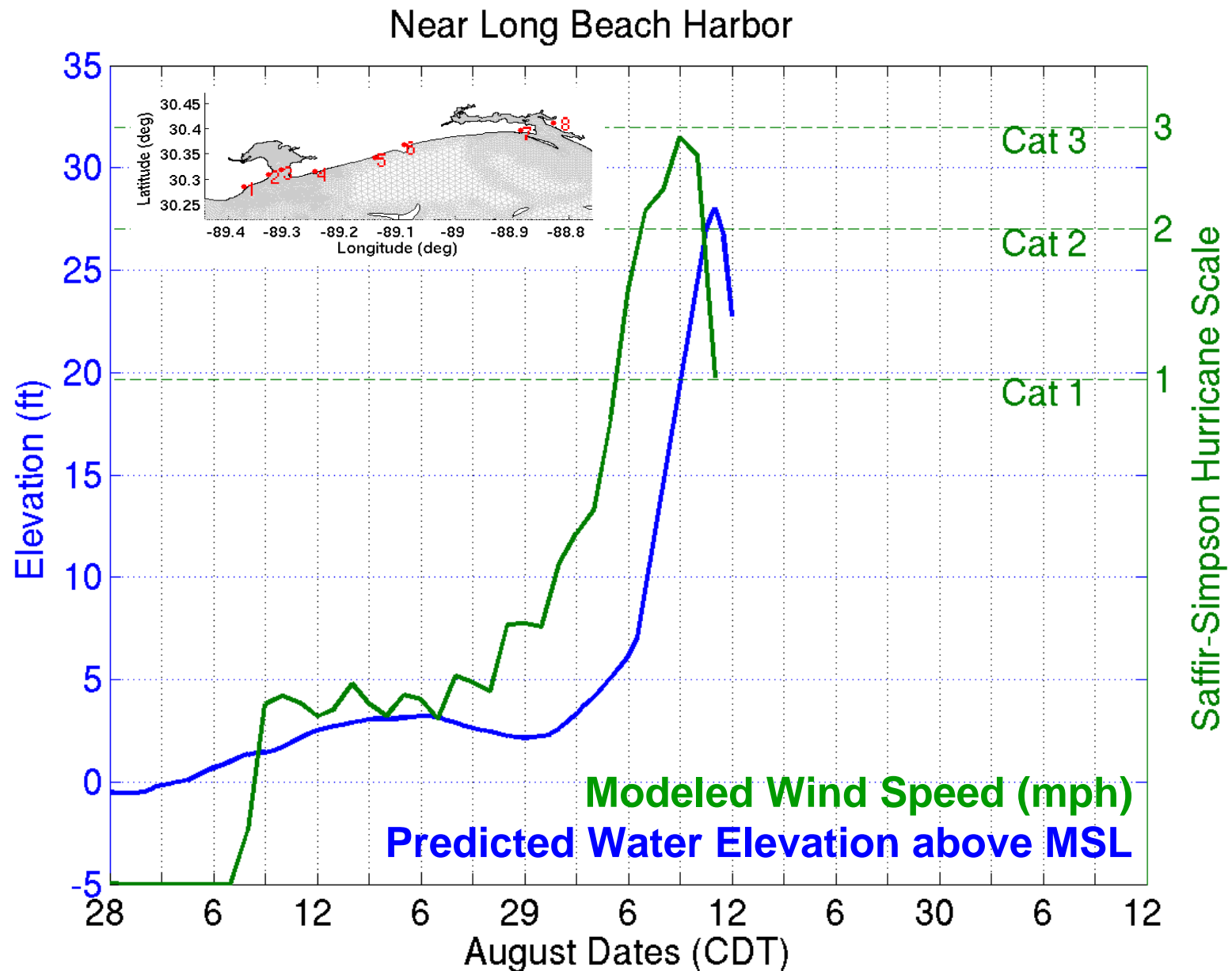
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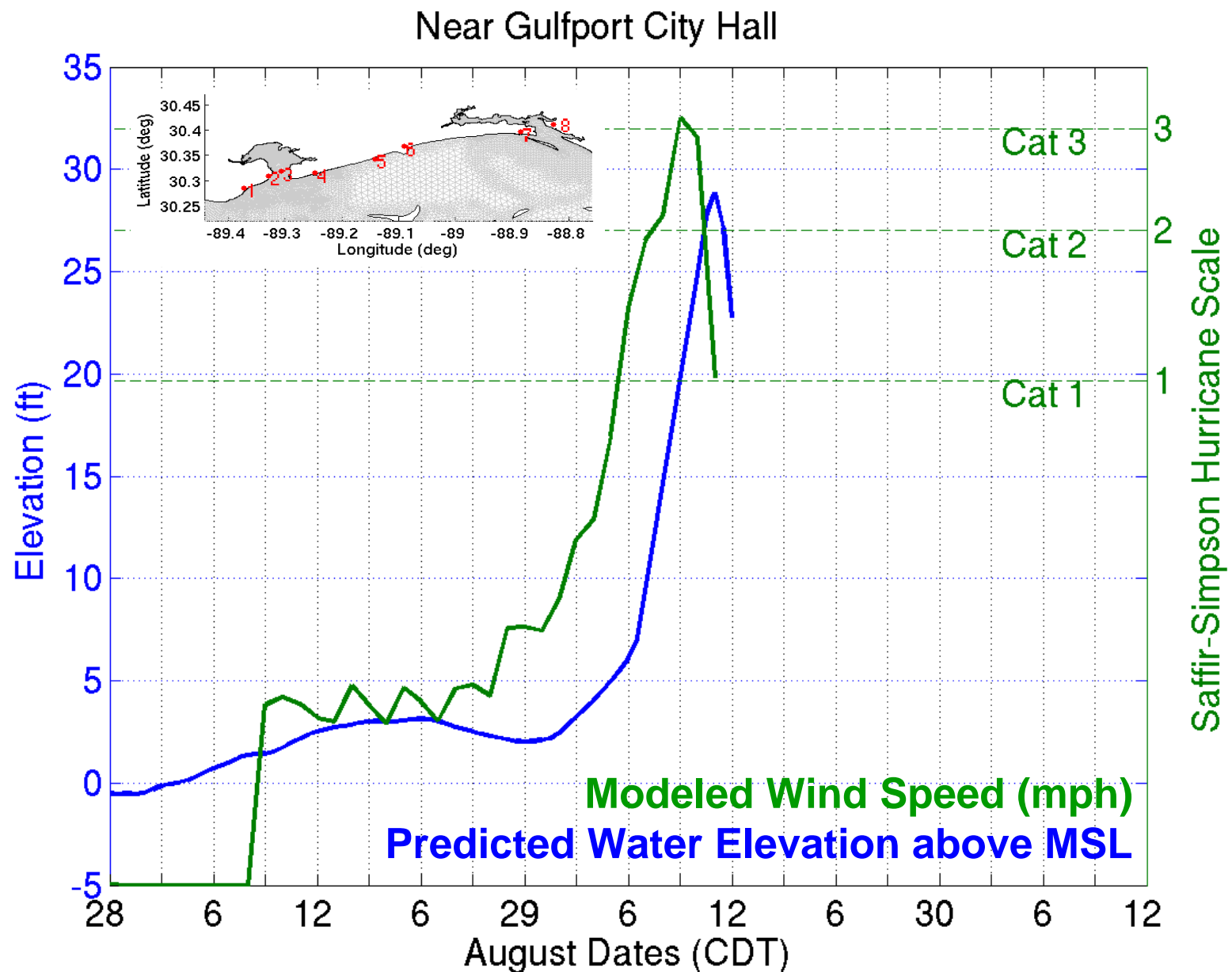
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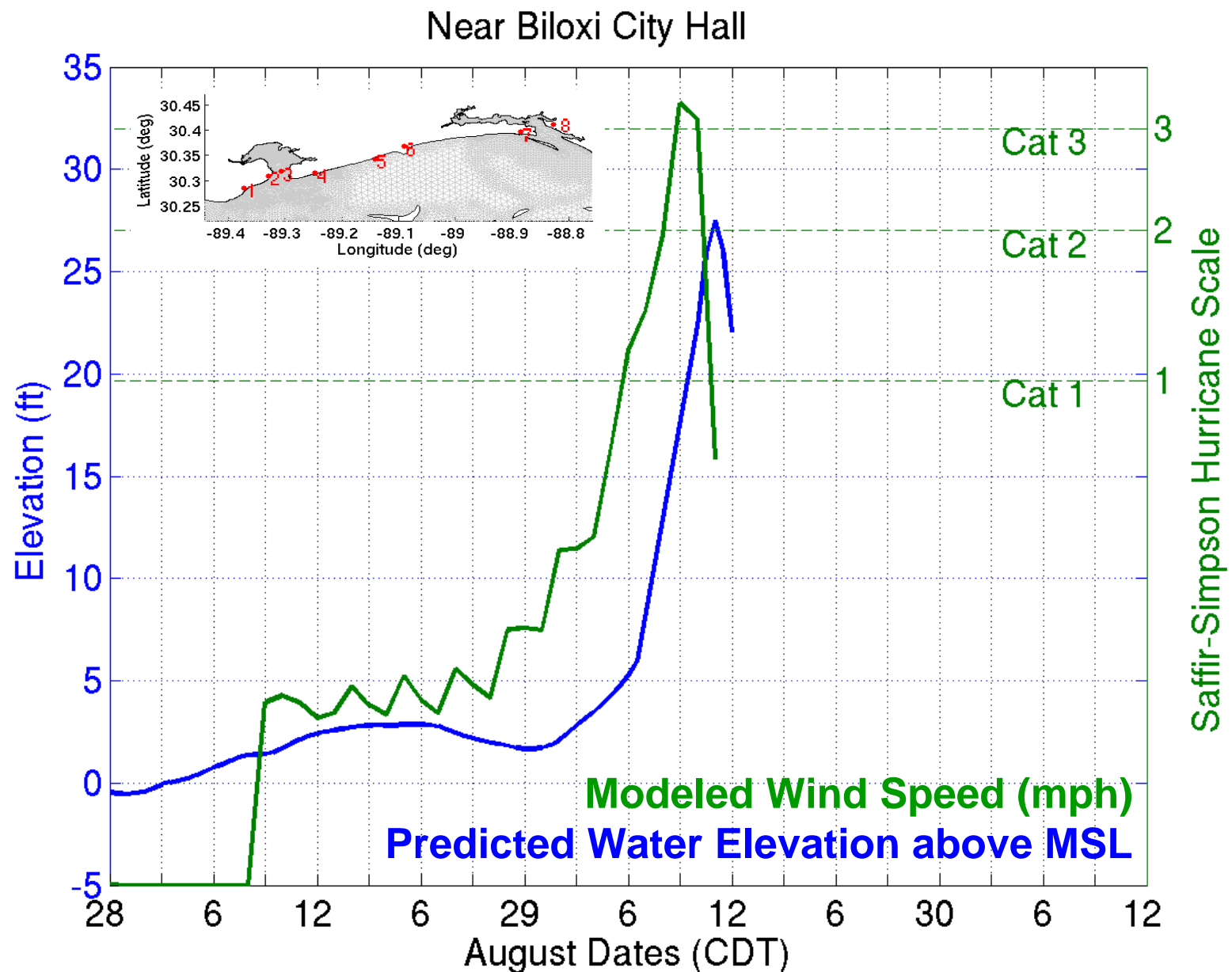
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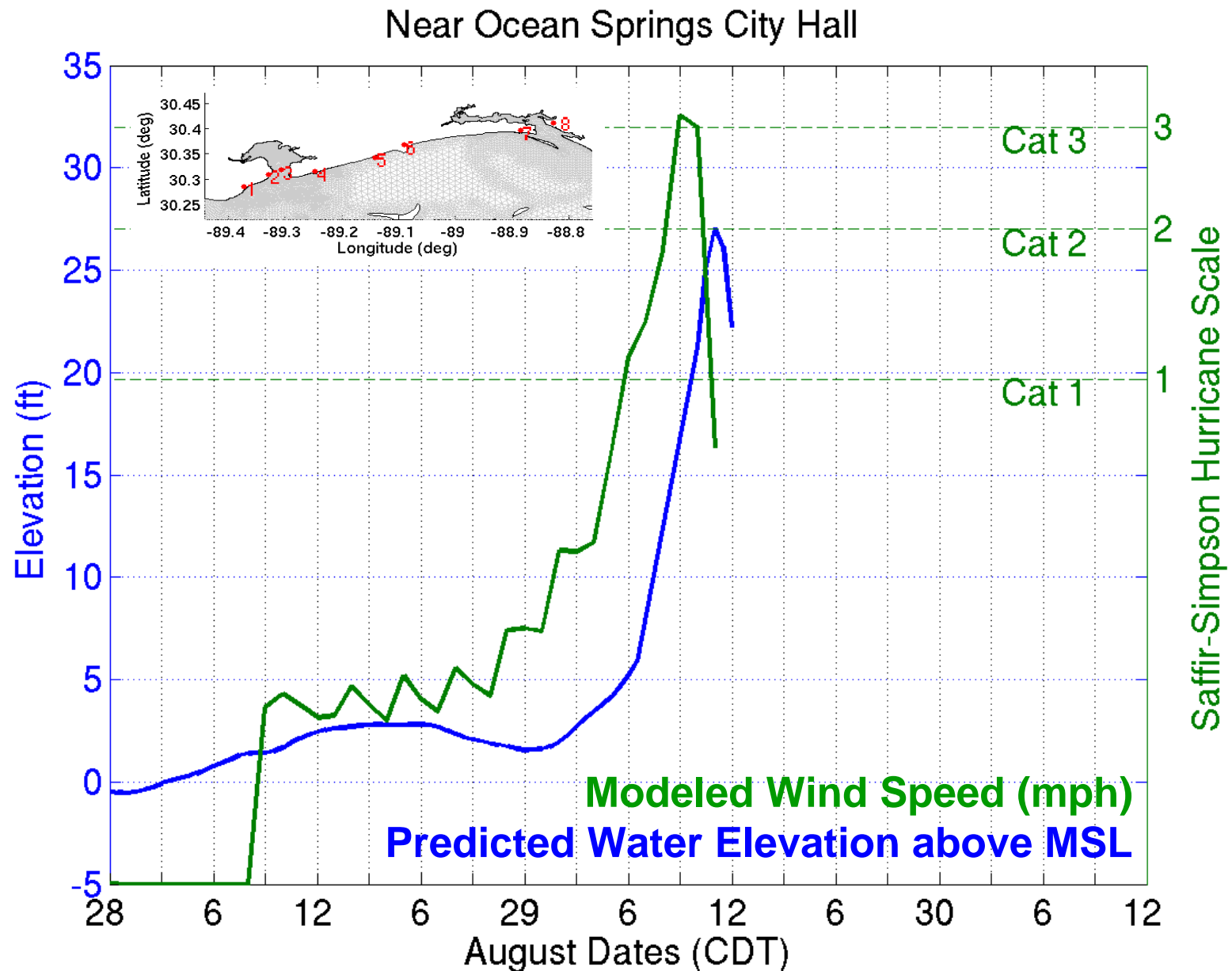
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